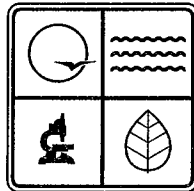


STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI AIR CONSERVATION COMMISSION



**PERMIT BOOK**

## PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **02 2 006 - 003** Project Number: **2005-11-029**

Owner: **Smurfit-Stone Container Enterprises, Inc.**

Owner's Address: **8182 Maryland Avenue, Clayton, Missouri 63105**

Installation Name: **Smurfit-Stone Container Enterprises, Inc.**

Installation Address: **1101 South Denton Road, Pacific, Missouri 63069-2299**

Location Information: **Franklin County, S13, T43N, R2E**

Application for Authority to Construct was made for:

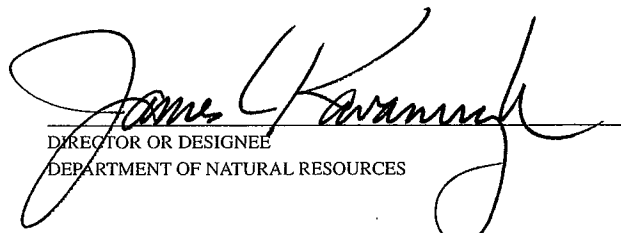
Installation of one (1) eight (8) station sheetfed, non-heatset, offset lithographic printing press and two (2) cutters at the existing printing operation in Pacific, Missouri. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☒ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

**FEB - 3 2006**

EFFECTIVE DATE

  
DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

**You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review.** Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

Page No.	2
Permit No.	
Project No.	2005-11-029

#### SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Smurfit-Stone Container Enterprises, Inc.  
Franklin County, S13, T43N, R2E

1. Smurfit-Stone Container Enterprises, Inc. shall keep the ink solvents and cleaning solutions in closed containers whenever the materials are not in use. Smurfit-Stone Container Enterprises, Inc. shall provide and maintain suitable, easily read, permanent markings on all inks, coatings, solvent and cleaning solution containers used with this equipment.
2. Smurfit-Stone Container Enterprises, Inc. shall place the cleaning cloths/rags that are used on this equipment in closed containers when not in use and while awaiting off-site transport.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2005-11-029  
Installation ID Number: 071-0031  
Permit Number:

Smurfit-Stone Container Enterprises, Inc.  
1101 South Denton Road  
Pacific, Missouri 63069-2299

Complete: November 15, 2005  
Reviewed: December 31, 2005

Parent Company:  
Smurfit-Stone Container Enterprises, Inc.  
8182 Maryland Avenue  
Clayton, Missouri 63105

Franklin County, S13, T43N, R2E

REVIEW SUMMARY

- Smurfit-Stone Container Enterprises, Inc. has applied for authority to install one (1) eight (8) station sheetfed, non-heatset, offset lithographic printing press and two (2) cutters at the existing printing operation in Pacific, Missouri.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are Manganese Compounds, Cobalt Compounds, Hydroquinone, Glyco Ethers, Naphthalene, Xylenes, Ethylene Glycol, Benzene, Phosphoric Acid, and Hexane. However, potential emissions of these HAPs are expected to be below threshold levels.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment. Subpart QQ, *Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing*, does not apply to this process since a lithographic printing technique is used.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) and Maximum Achievable Control Technology (MACT) regulations applies to the proposed source. MACT Subpart KK, *National Emission Standard for Hazardous Air Pollutants for the Printing and Publishing Industry*, does not apply to lithographic printing.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of Volatile Organic Compounds (VOC), including fugitives, are below de minimis levels.

- This installation is located in Franklin County, a nonattainment area for ozone (O<sub>3</sub>) and an attainment area for all other criteria air pollutants.
- This installation is not on the list of Named Installations [10 CSR 10-6.020(3)(B), Table 2]
- Ambient air quality modeling was not performed as part of this review. Potential HAP emissions were estimated to be less than Screen Modeling Action Levels (SMAL). No Screen 3 model is currently available, which can accurately predict ambient ozone concentrations caused by this installation's VOC emissions.
- Emissions testing is not required for the equipment.
- A revision to the Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.
- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

Smurfit-Stone Container Enterprises, Inc. manufactures folding cartons from paperboard at their installation in Pacific, Missouri. This installation prints folding cartons to meet customer specifications and product end use requirements. Smurfit-Stone Container Enterprises, Inc. is a major source of VOCs and a Part 70 Operating Permit (OP1999151) was issued on September 24, 1999 and the renewal OP2005-010 issued on 05/23/2005. This installation currently operates four (4) existing sheetfed, non-heatset, offset lithographic presses and one (1) flexographic press. The removal of the Harris lithographic press occurred in 1999 and the 7 unit Planeta/RZ Press (identified as EU0030) was removed in February 2003. The removal of the Planeta/RZ press alters the plant wide PTE calculated in permit Number 062002-005. The existing VOC potential emissions calculation, based on permit data, shows a total of 86.67 tons per year.

Since this installation is located at Franklin County and potential emissions of VOC are above 100 tons, Missouri State Rule 10 CSR 10-5.442, *Control of Emissions from Lithographic Printing Operations*, applies to this installation. However, since the above mentioned rule applies to this installation, Missouri State Rule 10 CSR 10-5.520, *Control of Volatile Organic Compound Emissions From Existing Major Sources*, does not apply.

The installation is not a major source for HAPs and the MACT National Emission Standards for Hazardous Air Pollutants, 40 CFR parts 9 and 63 Subpart KK does not apply to lithographic printers. Therefore, this source is not on the list of Named Installations [10 CSR 10-6.020(3)(B), Table 2]. In addition, this is not a section 7 review because the MACT for this source category requires the site to be a major source for HAPs and the MACT does not apply to lithographic printing. Fugitive emission are not

required to be counted for this review because the MACT for the source category does not apply even though it is in a non-attainment area. This review will be a Section 5.

The following construction permits have been issued to Smurfit-Stone Container Enterprises, Inc. from the Air Pollution Control Program.

**Table 1: Previously Issued Permits.**

Permit Number	Description
0297-020	Installation of a six (6) color, seven (7) unit Komori offset sheetfed non-heatset printing press and the addition of a color unit to the existing Planeta RZ printing press.
1097-007	Installation of an eight (8) unit offset, sheetfed, non-heatset, lithographic printing press.
OP1999-151	Part 70 Operating Permit
0498-008	Installation of a one (1) color flexographic press and a natural gas-fired dryer.
062002-005	7 station lithographic printing press
OP2005-010	Part 70 Operating Permit Renewal

## PROJECT DESCRIPTION

Smurfit-Stone Container Enterprises, Inc. has proposed to install one (1) eight (8) station sheetfed, non-heatset, offset lithographic printing press (EP09) and two (2) cutters.

The two new cutters are insignificant air pollution emissions sources.

The printing press is an eight-station press capable of printing seven (7) colors and applying an aqueous overprint material (coating) in the seventh station. This press includes infrared (IR) drying lights as well hot and cold air knives to enhance normal ambient drying of the lithographic inks and aqueous and U.V. coatings. This press is capable of printing 14,000 sheets per hour. Historical data from the existing presses in this installation are used to calculate the maximum ink and coating usage per sheet in the new press.

## EMISSIONS/CONTROLS EVALUATION

VOCs and HAPs will be emitted from the use of non-heatset inks, coatings, fountain solutions, and cleaning solutions from this project. In the non-heatset process, the Printing Industries Association (PIA) contends that 95% of the VOC from the ink oil and coatings are retained in the paper due to oxidation and absorption of the ink. On April 27, 2005 in a memorandum issued by Leanne Tippet Mosby, Director Air Pollution Control Program, accepted the position that only 5% of emissions from the ink oil and coatings are emitted.

Potential emissions were estimated using a mass balance approach with data from Material Safety Data Sheet (MSDS) supplied by the applicant. Potential emissions of the new equipment were based on the maximum hourly design rate of the equipment assuming continuous operation (8760 hours per year) and the VOC and HAP content in

the chemicals. The following table provides an emissions summary for this project.

**Table 2: Emissions Summary (tons per year).**

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2004 EIQ)	Potential Emissions of the Application	Installation Conditioned Potential
PM <sub>10</sub>	15.0	1.62*	0.45	0.009	N/A
SO <sub>x</sub>	40.0	0.08	N/D	N/A	N/A
NO <sub>x</sub>	40.0	3.99	0.22	N/A	N/A
VOC	40.0	86.67	26.63	36.87	N/A
CO	100.0	0.74	0.05	N/A	N/A
HAPs	10.0/25.0	4.59	0.11	0.74	N/A

N/A = Not Applicable; N/D = Not Determined

\* Only the PM<sub>10</sub> is from permit number 1097-007.

The existing potential emissions are based on the existing potential emissions totals in permit 062002-005 minus the existing potential emissions permit 1097-007 minus the potential emissions of the application in permit 0297-020. However, the PM<sub>10</sub> emission did not balance and the value from permit 1097-007 for PM<sub>10</sub> was conservatively substituted. These calculations are done to take into account the removal of the 7 unit Plantera/RZ press in February 2003. Per the instructions established for the Emission Inventory Questionnaire (EIQ), those HAPs that are either VOCs or Particulate Matter less than 10 microns (PM<sub>10</sub>) can be reported as VOC on the EIQ. Manganese Compounds, Cobalt Compounds, and Phosphoric Acid are the HAPs in this review that can only be counted as a HAP on the EIQ. For potential to emit calculations Manganese Compounds and Cobalt Compounds are counted as both a HAP and as PM<sub>10</sub> emissions.

#### PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM<sub>10</sub>, VOC and HAPs are below de minimis levels.

#### APPLICABLE REQUIREMENTS

Smurfit-Stone Container Enterprises, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

## GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Control of Odors in the Ambient Air*, 10 CSR 10-5.160

## SPECIFIC REQUIREMENTS

- *Control of Emissions from Lithographic Printing Facilities*, 10 CSR 10-5.442
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

## AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was not performed as part of this review. Potential HAP emissions were estimated to be less than Screen Modeling Action Levels (SMAL). No Screen 3 model is currently available, which can accurately predict ambient ozone concentrations caused by this installation's VOC emissions.

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Tim Hines  
Environmental Engineer

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Date



## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated November 04, 2005, received November 9, 2005, designating Smurfit-Stone Container Enterprises. Inc. as the owner and operator of the installation.
- Material Safety Data Sheet (MSDS) provided by the applicant.
- St. Louis Regional Office Site Survey, dated November 23, 2005.